

REMARKS

Claims 1, 3 and 6 have been amended to further clarify the patentable distinction of the present invention over the cited reference. Support for the claim amendments can be found at page 8 of the specification, for example. No new matter has been introduced.

Claims 1-6 are currently pending and under consideration. Reconsideration is respectfully requested.

*Again, in the Office Action mailed March 10, 2005, the reference AG, Japanese Patent Application Laid-open No. 59-159498 was not considered by the Examiner because a translation thereof was not provided. However, the Information Disclosure Statement filed September 17, 2003 states that in accordance with 37 C.F.R. § 1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is set forth in the application. Thus, the Applicants respectfully submit that at page 4 of the Specification, a concise explanation of what is presently understood to be the relevance of reference AG is set forth. Therefore, the Applicants respectfully request that the Examiner consider this reference.

I. REJECTION OF CLAIMS 1-6 UNDER 35 U.S.C. 102(e) AS BEING ANTICIPATED BY GRIFFIS (U.S. PATENT NO. 6,683,432):

Claim 1 of the present invention recites "a robot system comprising a robot, and at least one apparatus which is driven by a servomotor and carries out operation in cooperation with the robot, wherein the robot system further comprises: a detection unit to detect an operator's approach to the specified apparatus including at least one apparatus which carries out operation in cooperation with the robot or operator's entry to an off-limit region set for the specified apparatus and to output a notice of operator's approach or entry, provided for each specified apparatus; and a controller to control the robot, the controller comprising: a unit connecting and interrupting power supply to the servomotor which drives the specified apparatus, provided for each specified apparatus, an emergency stop unit receiving the notice of operator's approach or entry from the detection unit to bring the robot system into an emergency stopped state, **wherein power supply to the robot and to each specified apparatus is automatically interrupted based upon the notice, and a monitoring unit for each specified apparatus to monitor a connection state and an interruption state of power supply to the servomotor which drives the specified apparatus, and canceling the notice of operator's approach or entry to prevent the notice from inputting to the emergency stop unit, for the specified**

apparatus when the power supply is interrupted by said unit connecting and interrupting power supply to the servomotor which drives the specified apparatus”.

Griffin discloses a safety circuit for monitoring a number of sensors for intrusion of objects or people into a workspace of a robot. The safety circuit monitors a motion control system, and controls the drive power to the motion control system via an emergency-stop circuit (see Abstract and FIG. 2, for example).

At page 2 of the Office Action, the Examiner asserts that the motion control system 11 and intrusion sensor 13 shown in FIG. 1, for example are comparable to the Applicants “detecting unit” as recited in claim 1, for example. Further, the Examiner asserts that the intrusion sensors 13 and 41” shown in FIG. 4 of Griffis are comparable to the Applicants “monitoring unit” as also recited in claim 1.

The Applicants respectfully submit that Griffis fails to disclose “the controller comprising: a unit connecting and interrupting power supply to the servomotor which drives the specified apparatus, provided for each specified apparatus, an emergency stop unit receiving the notice of operator’s approach or entry from the detection unit to bring the robot system into an emergency stopped state, wherein power supply to the robot and to each specified apparatus is automatically interrupted based upon the notice, and a monitoring unit for each specified apparatus to monitor a connection state and an interruption state of power supply to the servomotor which drives the specified apparatus, and canceling the notice of operator’s approach or entry to prevent the notice from inputting to the emergency stop unit, for the specified apparatus when the power supply is interrupted by said unit connecting and interrupting power supply to the servomotor which drives the specified apparatus,” as recited in claim 1, and as shown in FIGS. 3 and 4 of the present invention, for example.

At page 2 of the Office Action, the Examiner admits that Griffis fails to discuss the motion control system 11 comprising the units, emergency stop circuit, and the monitoring unit. However, the Examiner asserts that it would be obvious to modify Griffis such that the controller includes all of these elements. The Applicants respectfully disagree with the Examiner’s assertion of obviousness. Again, at column 4, lines 63- column 5, line 4, Griffis, specifically discloses that the motion control system 11 is used to represent all of the hardware and software **(exclusive of the emergency-stop circuit)** that perform motion control. Thus, the motion control system 11 only includes the actual motion controller, a PC, servomotor amplifiers, servomotors and all process-related software (see column 5, lines 1-2). **The motion control system 11 is treated as a sensor, and is assumed to be unreliable, requiring constant**

monitoring and periodic checking to ensure proper operation (see column 5, lines 2-7).

Thus, based upon these cited portions of Griffis, it would not be obvious to include the emergency stop circuit 12 in the motion control system 11. Therefore, the Applicants traverse the Examiner's assertion of obviousness, and request that the Examiner withdraw the rejection or provide an additional reference to support this assertion.

In addition, at pages 2 and 3 of the Office Action, the Examiner asserts that the intrusions sensors 13 and 41 shown in FIG. 4 of Griffis are comparable to the Applicants' "monitoring unit," as recited in claim 1, for example. Thus, the Examiner asserts that these sensors 13 and 41 cancel a notice to the emergency-stop circuit 12, when power has been interrupted, and asserts that the safety circuit discussed in column 11, lines 55-65 of Griffis includes a reset feature.

In contrast, as previously mentioned, at lines 55-65 of column 11, Griffis merely discusses a recovery condition (shown in FIG. 3). This recovery is from a safety circuit fault. Typically, an incompatible data set from the motion controller would be indicative of a failure of one of the position sensors, which would require a maintenance operation to debug, reset and correct. A corrupt data set would be identified by a failed cyclic redundancy check (CRC), thus also requiring maintenance. Thus, in Griffis, the sensors 13 and 41 do not cancel a notice to the emergency stop circuit 12 to prevent the notice from inputting to the emergency stop circuit 12 when the power is interrupted. Instead, as shown in FIG. 4, the sensors 13 and 41 merely return sensory data to a respective safety micro 10 or 41, and the respective safety micro monitors each other and makes sure that the respective sensors 13 and 41 are working properly. That is, here, Griffis is merely disclosing maintenance and resetting of the sensors.

Accordingly, the teaching of Griffis is fundamentally different from that of the present invention.

Amended claims 3 and 6 recite similar features as those recited in amended claim 1.

Thus, although the above comments are specifically directed to claim 1, it is respectfully submitted that the comments would be helpful in understanding differences of various other rejected claims over the cited reference. Therefore, it is respectfully submitted that the rejection is overcome.

II. CONCLUSION:

In view of the foregoing amendments and remarks, it is respectfully submitted that each

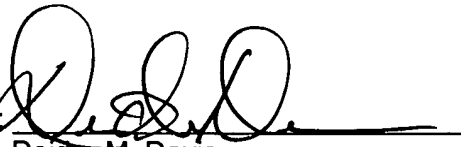
of the claims patentably distinguishes over the prior art, and therefore, defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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